

REMARKS

Claims 50-59 are pending in this application, of which claim 50 has been amended and claims 76-81 are newly-added.

The Examiner has requested a new Abstract reflecting the method of storing an optical device.

Accordingly, such a new Abstract is attached hereto.

Claims 50-59 stand rejected under 35 USC §112, second paragraph, as indefinite.

Accordingly, claim 50 has been amended to correct the noted instances of indefiniteness, and the 35 USC §112, second paragraph, rejection should be withdrawn.

Claims 50 and 54-59 stand rejected under 35 USC §103(a) as unpatentable over U.S. Patent 4,616,908 to King (hereinafter "**King**") in view of U.S. Patent 5,821,175 to Engelsberg (hereinafter "**Engelsberg**").

Applicants respectfully traverse this rejection.

King discloses an arrangement in which a barrel 67 is provided with a port 31 at an upper side thereof, and a port 32 at a lower side thereof, respectively. Helium gas is filled in the barrel through the port 31, while helium gas filled in the barrel is discharged from the barrel through the port 32.

Engelsberg discloses an arrangement in which surface contaminants are removed from a surface of a substrate without altering the underlying molecular crystal structure of the substrate. When the contaminants are removed, gas is caused to flow across the substrate surface and the substrate is continuously irradiated at an energy density and duration sufficient to release surface

contaminants from the substrate surface, and yet not so great as to alter the molecular crystal structure of the substrate surface.

However, neither **King** nor **Engelsberg** discloses, teaches or suggests the optical device defined in amended claim 50. Namely, neither reference discloses, teaches or suggests the optical device comprising a barrel with plural optical elements disposed therein, and protective filters detachably mounted on each end of the barrel, with at least one of the protective filters detachably mounted on each end of the barrel, with at least one of the protective filters being provided with a light permeable window.

In **Engelsberg**, the substrate is irradiated with light. In contrast, in the present invention, as recited in claim 50, as amended, optical elements disposed in the barrel are irradiated with light in order to remove a contaminating material attached to the surface of each of the optical elements.

In **King**, although a barrel with plural optical elements disposed therein is disclosed, protective filters detachably mounted on each end of the barrel are not disclosed.

Thus, the 35 USC §103(a) rejection should be withdrawn.

It should be noted that the amendment to claim 50 does not narrow or limit the scope of claim 50 and is made for the sole purpose of addressing the 35 USC §112, second paragraph, rejection.

In view of the aforementioned amendments and accompanying remarks, claims 50-59, as amended, as well as newly-added claims 76-81 are in condition for allowance, which action, at an early date, is requested.

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Attached hereto is a marked-up version of the changes made to the Abstract and claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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PATENT TRADEMARK OFFICE

Enclosures: Version with markings to show changes made
Substitute Abstract of the Disclosure
Petition for Extension of Time

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IN THE ABSTRACT:

Amend the Abstract as follows:

A [reticle (R) is irradiated with an ArF excimer laser beam to transfer a pattern on the reticle (R) onto a wafer (W) through a projection optical system (PL). Each of a plurality of illuminating lens units (2) arranged in the illuminating optical passage has a barrel containing a plurality of lenses, and caps are so provided as to be spaced from the lenses at both ends. Lens chambers among the lenses are filled with an inert gas, and the spaces between the caps and the lenses are also filled with an inert gas. When the illuminating lens unit (2) are housed in and illuminating optical path housing, the caps are removed while purging the spaces. Therefore, the lenses at both ends are prevented from being contaminated and the transmittance of the optical lens device for exposure with light having a wavelength of shorter than 300 nm is prevented from lowering] method of storing an optical device with plural optical elements disposed, in which the optical device has a barrel with plural optical elements disposed therein, and protective filters detachably mounted on each end of the barrel, with at least one of the protective filters being provided with a light permeable window. The method includes the steps of: mounting the protective filter on each end of the barrel respectively; supplying the barrel with an inert gas from a gas source; removing a contaminating material attached to the surface of each of the optical elements by using light irradiation; discharging the inert gas supplied in the barrel together with

the contaminating material removed from the surface of each of the optical elements; and storing the optical device in a state in which the barrel is filled with the inert gas supplied from the gas source.

IN THE CLAIMS:

Please amend claim 50 as follows:

50. (Amended) A method of storing an optical device with plural optical elements disposed[;], wherein[:] the optical device has a barrel with plural optical elements disposed therein, and protective filters detachably mounted on each end of the barrel, with at least one of the protective filters being provided with a light permeable window[;],

the method [of storing is characterized by] comprising the steps of:

[irradiating a surface of each of the optical elements with a light for removing a contaminating material attached on the surface of each of the optical elements;

filling the barrel with an inert gas to a predetermined level of pressure after the contaminating material removed from the surface of each of the optical elements has been discharged from the barrel; and]

mounting the protective filter on each end of the barrel, respectively;

supplying the barrel with an inert gas from a gas source;

removing a contaminating material attached to the surface of each of the optical elements by using light irradiation;

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discharging the inert gas supplied in the barrel together with the contaminating material removed from the surface of each of the optical elements; and

storing the optical device in a state in which the barrel is filled with the inert gas supplied from the gas source.